# Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

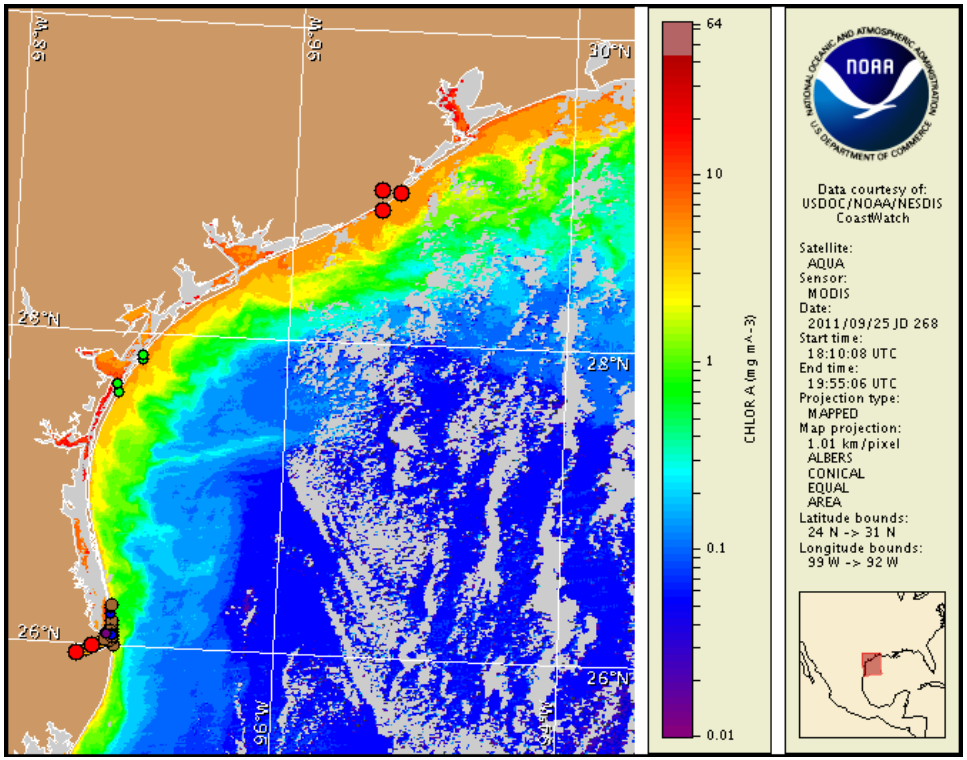
Monday, 26 September 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Friday, September 23, 2011




Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from September 16 to 25 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive: http://tidesandcurrents.noaa.gov/hab/bulletins.html

## Conditions Report

A harmful algal bloom has been identified along the Texas coast in the San Luis Pass area and also continues to be present along the Texas coast in the South Padre Island and Brazos Island State Park regions, within the Brownsville Ship Channel area, and within the lower Laguna Madre. Patchy high impacts are possible in the coastal Freeport region and Brownsville Ship Channel area today through Wednesday. Patchy moderate impacts are possible within the lower Laguna Madre and along the coastal South Padre Island and Brazos Island State Park regions today through Wednesday. No additional impacts are expected at the coast in Texas today through Thursday, September 29. Reports of stressed fish have been received at the mouth of the San Bernard River and within the Intracoastal Waterway south of San Luis Pass.

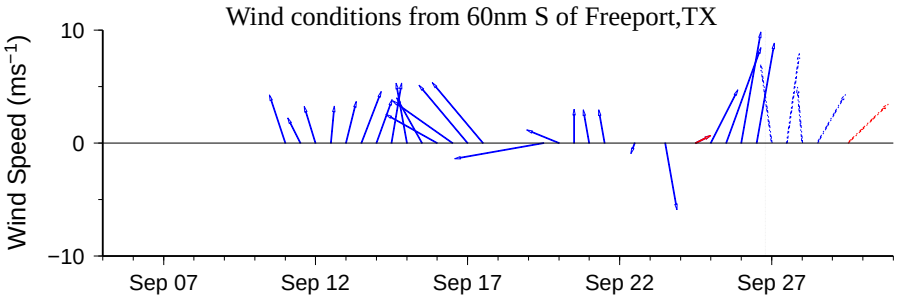
## Analysis

A harmful algal bloom has been identified from San Luis Pass to the gulf side of the Brazos River and also continues to be present along the Texas coast in the South Padre Island and Brazos Island State Park regions, within the Brownsville Ship Channel area, and within the lower Laguna Madre. Late last week, along the northern coast, two samples collected at the coast near Freeport and one sample collected within the Dow Barge Canal indicated 'high' *Karenia brevis* concentrations (9/22; TPWD). Four samples collected in the Corpus Christi and Port Aransas region last Thursday indicated that *K. brevis* is not present; however, TAMU's Imaging Flow CytoBot identified 'very low' concentrations in samples collected from its location in the Port Aransas ship channel (9/22; TPWD). Samples collected over the weekend in southern Texas indicate that *K. brevis* concentrations remain 'high' in the Brownsville Ship Channel (9/23-25; TPWD). Weekend samples collected within the lower Laguna Madre reveal 'low a' *K. brevis* concentrations remain at Brazos Santiago Pass, and two other samples collected in this region, at the Isla Blanca Boat Ramp and the west end of the Queen Isabella Memorial Causeway, indicate 'very low b' and 'very low a' *K. brevis* concentrations, respectively (9/23-25; TPWD). Two samples collected at the UTPA Coastal Studies lab over the weekend indicate *K. brevis* concentrations ranging from 'very low b' to 'low a' (9/23-25; TPWD). *K. brevis* has not been reported elsewhere along the coast of Texas.

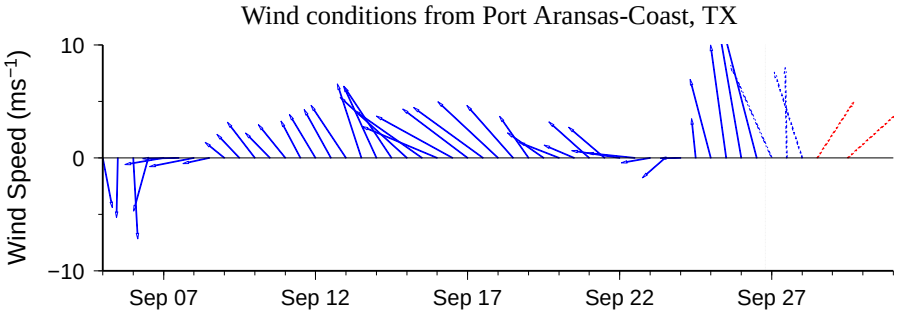
Recent MODIS imagery (9/25, shown left) indicates elevated chlorophyll (1-4 $\mu$g/L) stretching alongshore the Texas coastline from Pass Cavallo to Brazos Santiago Pass. Elevated chlorophyll (2-9 $\mu$g/L) is also visible along- and offshore from Sabine Pass to Pass Cavallo.

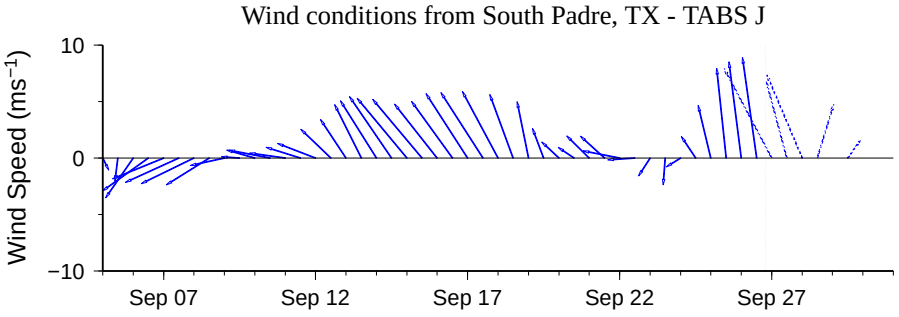
Reports of stressed fish have been received at the mouth of the San Bernard River and within the Intracoastal Waterway south of San Luis Pass (9/26; TPWD). Onshore winds through Wednesday will increase the potential for impacts in the affected regions of southern and northern Texas.

Forecast models indicate a maximum bloom transport of over 160km north along the coast from San Luis Pass from September 22 to September 29, and a maximum bloom transport of 100km north from Brazos Santiago Pass from September 25 to September 29. Forecast models indicate a maximum transport of 60km north from Port Aransas from September 25-29. Derner, Kavanaugh




Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



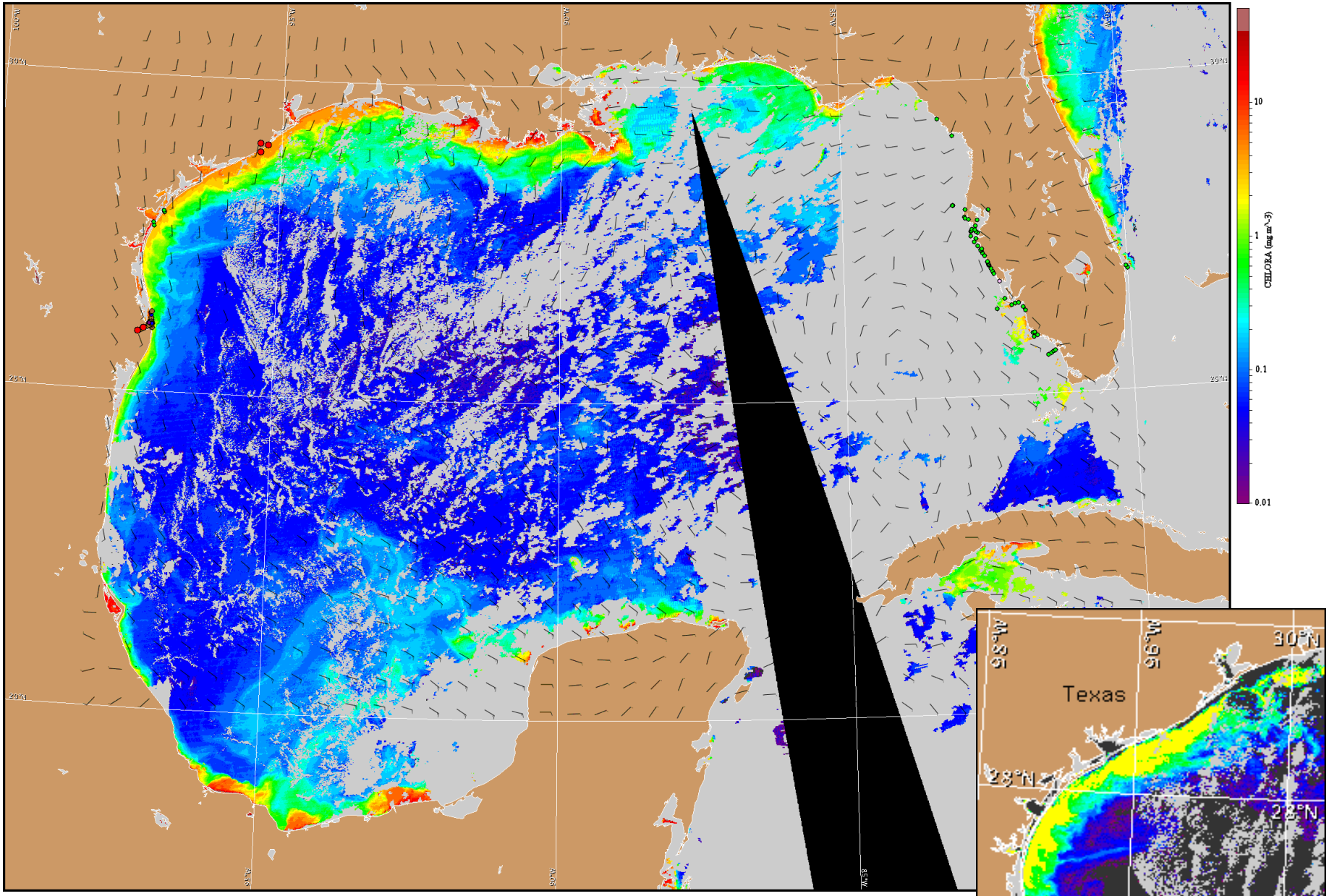




# Wind Analysis

**Galveston and Freeport area**: South winds (10-20kn, 5-10m/s) today. South winds (10-15kn, 5-8m/s) Tuesday. South to southwest winds (5-10kn, 3-5m/s) Wednesday.

**Port Aransas**: South winds (15-25kn, 8-13m/s) today. South winds (10-20kn, 5-10m/s) Tuesday. Southeast winds (5-10kn, 3-5m/s) Wednesday.

**South Padre**: South to southeast winds (10-20kn, 5-10m/s) today through Tuesday. South winds (15kn, 8m/s) Wednesday.




Satellite chlorophyll image and forecast winds for September 27, 2011 12Z with cell concentration sampling data from September 16 to 25 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:
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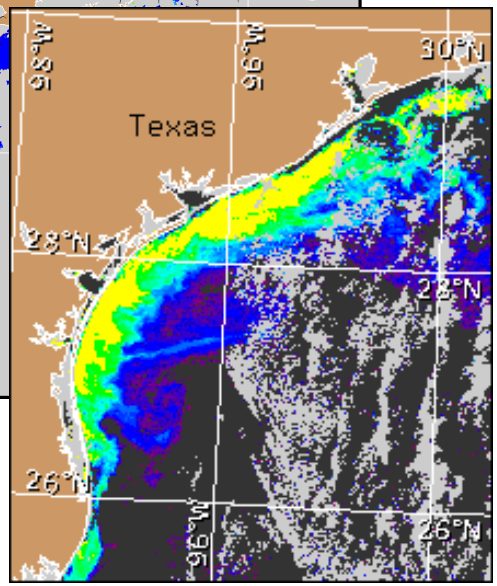


Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).